

## REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated December 12, 2007. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

### Status of the Claims

Claims 12-13 stand for consideration in this application. Claim 11 is being cancelled without prejudice or disclaimer. Claim 12 is being amended to more particularly point out and distinctly claim the subject invention.

All the amendments to the specification and the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

### Formality Rejection

The Title of the Invention was objected to as being non-descriptive.. Since the Title of the Invention is being amended as required by the Examiner, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

### Double Patenting Rejections

Claims 11-13 were rejected under the doctrine of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of US Patent No. 7,273,704 in view of Miyahara '347 and Steinthal '684, and provisionally rejected claims 12-13 over claims 4-5 of co-pending US. App. No. 10/499,005 in view of Steinthal '684, and provisionally rejected claim 11 was provisionally rejected under 35 U.S.C. §101 over claim 4 of co-pending US. App. No. 10/499,005 as claiming the same invention.

Applicants contend that claim 12 now recites at least the distinctive limitations of "providing a plurality of biomolecule detecting elements each of which includes an insulated gate field effect transistor on which a biomolecular probe is immobilized, a transmission/reception antenna embedded in an insulating film ...," and "putting the plurality of biomolecule detecting elements having different kinds of single-stranded nucleic acid probes immobilized thereon as said biomolecular probe, and a buffer solution in a reaction

vessel” that are absent from claims of the cited references. Accordingly, the withdrawal of this outstanding double patenting rejections is in order, and is therefore respectfully solicited.

#### Prior Art Rejections

Claim 11 was rejected under 35 U.S.C. §102(e) as being anticipated by Miyahara (US 2005/0170347), and under 35 U.S.C. §103 (a) as being unpatentable over an article by Fritz (PNAS 10/29/2002; 99(22): 14142-14146) in view of Hashmoto (US 5,776,672), and claims 12-13 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Miyahara ‘347 in view of Yazawa (US 2004/0121354), and over Fritz in view of Hashmoto ‘672 and Steinthal (2004/0135684). Applicants respectfully traverse these rejections for the reasons set forth below.

The method for analyzing nucleic acids of the present invention, as now recited in claim 12, comprises: providing a plurality of biomolecule detecting elements each of which includes an insulated gate field effect transistor on which a biomolecular probe is immobilized, a transmission/reception antenna embedded in an insulating film (p. 5, lines 8-9; original claims 6 & 8), a reception circuit, and a transmission circuit; putting the plurality of biomolecule detecting elements having different kinds of single-stranded nucleic acid probes immobilized thereon as said biomolecular probe, and a buffer solution in a reaction vessel, and receiving a signal from each of said biomolecule detecting elements using an external receiver; introducing a sample solution containing at least one kind of nucleic acid into said reaction vessel and carrying out hybridization with said single-stranded nucleic acid probe; introducing an intercalator solution into said reaction vessel and causing it to react with the nucleic acid that has become double-stranded; and receiving a signal from each of said biomolecule detecting elements using an external receiver.

Applicants contend that none of the cited references or their combinations teaches or suggests such a step of “providing a plurality of biomolecule detecting elements each of which includes an insulated gate field effect transistor on which a biomolecular probe is immobilized, a transmission/reception antenna embedded in an insulating film, a reception circuit, and a transmission circuit” in conjunction with all the subsequent steps as a combination for analyzing nucleic acids as in the present invention.

The present invention is unique in the combination of all of steps for analyzing nucleic acids. In particular, by embedding the antenna in an insulating film, the present invention prevents adverse effects of the buffer solution and intercalator solution on transmission/reception of detection signals, and to allow high-accuracy transmission of

signals. An antenna is typically exposed to outside to have better receptive. However, the present invention applies the antenna embedded in an insulating film for only quite a short-distance communication between the inside and outside of the elements.

Miyahara simply does not mention any transmission/reception antenna, much less of one embedded in an insulating film as the present invention.

The other references fail to compensate for Miyahara's deficiencies.

Applicants contend that none of the cited references or their combinations teaches or suggests each and every feature of the present invention as recited in independent claim 12. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

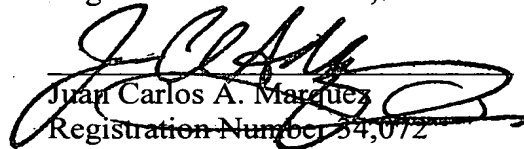
### Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

\_\_\_\_\_  
Stanley P. Fisher  
Registration Number 24,344

  
Juan Carlos A. Marquez  
Registration Number 34,072

**REED SMITH LLP**  
3110 Fairview Park Drive  
Suite 1400  
Falls Church, Virginia 22042  
(703) 641-4200

**June 12, 2008**

SPF/JCM/JT